



866-821-9388

# Pulsation Dampener Services

Member of the PDS Oilfield Service family

We specialize in the field repair of all types of pulsation dampener assemblies. We currently service the East Texas, North Louisiana, and Dallas - Fort Worth areas, with expansion planned for all productive markets. We have established ourselves as the company to call on when you need the absolute best in pulsation dampener repair.

We offer service on a single pump or fleet basis, with written reports of each rig's equipment and recommendations. We have the absolute best record for bladder life, and service availability with competitive pricing. An inspection consists of monitoring, adjusting pre-charge, inspection of gauges, charging valves, and visible leaks.

We NEVER use cheap or imported replacement bladders. We are distributors for two bladder manufacturers, that give us the ability to have the absolute best fitting, and longest lasting replacement rubbers.

## TECHNICAL BRIEF

### Introduction

Why reciprocating pumps require pulsation dampeners:

- Early failure of plungers, valves, seats, springs, and packing
- Piping and connection fatigue
- Loss of pump efficiency
- Excessive downtime

These are the more common problems in the fluid ends and piping systems of reciprocating pumps that result in unnecessarily high maintenance costs as well as unsafe conditions. The cause? Pulsation.

### What is Pulsation?

A pulsation (or pressure surge) is a variation in pressure within pumping systems caused by the inertia of the fluid column being accelerated and decelerated. The magnitude of these pressure surges depends upon the characteristic of each particular pumping system. The number of plungers (pistons), bore and stroke length, crank angle, and piping configuration are generally the more important factors to consider. Multiple pumps with common suction and/or discharge headers tend to experience additional problems with overlapping pressure surges and harmonic interference. Regardless of the magnitude, most positive displacement pumps used in the industry today encounter pulsation.

### Discharge

Difficult piping configurations on the discharge side, especially multiple pumps with a common header, usually result in severe pulsations in the piping system. This also affects downstream components such as meters, gauges, valves, and the flowline itself. Discharge dampener absorbs and evens the flow from the pump with the same type of cartridge function as the suction stabilizer. It also helps to eliminate harmonic interference in multiple pump/common discharge installations.

### Solution

In addition to lower maintenance costs and reduced downtime due to system failure, the stabilized pumping system permits increased pump speeds and yields higher volumetric efficiencies. To achieve desired results in your pumping systems, we provide a full line of Pulsation Dampeners.

### Reduce Maintenance and Operating Costs

- Extend valve, fitting, and gauge life
- Eliminate vibration that causes significant damage to weld connections and support structures
- Improve metering and control instrument life span
- Eliminate wear-producing shock in bearings, packing, seals, and other pump components
- Reduce down time required for part replacement
- Increase system capacity by safely permitting increased flow velocity and operating pressures
- Improve accuracy of setting and measuring and metering equipment
- Promote safety by preventing breakage and leaks in systems carrying flammable or hazardous materials



## Products and Durability

Smart Drilling Contractors know that the cheapest solution is almost always the worst solution. Quality when it counts is the what separates Drilling Contractors with rigs working at premium day rates from and the Contractors with rigs going in the grass. If you are one of the Drilling Contractors that value quality, durability, and expert installations, we want your business.

Perfect-Fit Pulsation Dampener Replacement Parts:

- Fit Continental Emsco®:
  - PD 45
  - PD 55



- Fit Hydril®:
  - K-10
  - K-20
  - IP-2½



- Pressure Control Kits and Hoses
- Repair Kits:
  - Stabilizer plates
  - Gaskets
  - Bolts
  - Gauges
- Molded components are available in:
  - Buna-N
  - Viton
  - Hydrogenated Nitrile
- Rubber products precision molded to meet or exceed all OEM specifications
- Severe-service, highest quality compounds ensure superior performance as demanded in tough-duty oilfield applications.
- ISO 9001 certification means only the highest quality in materials and workmanship

Pulsation Dampener Replacement Parts:

- Reduce Operating Costs
- Extend product life for valve, fitting, metering, control instrument and gauges
- Virtually eliminate damage-causing vibrations to weld connections, support structures, and pump components
- Are molded to exact dimensions of corresponding vessel's internal cavity

K-20/ K-10 Repair Kit

- \*Bladder
- \*Stabilizer
- \*Retaining Plate
- \*Lockwasher
- \*Bolt
- \*2.5 inch 0-5000 psi liquid filled gauge
- \*Charging Valve

PD-53/55 - PD-42/45 Repair Kit

- \*Bladder
- \*2.5 inch 0-5000 psi liquid filled gauge
- \*Charging Valve



- **Synthetic Compound rubbers are rated for 5000 PSI**
- **We do not stock or install cheap or imported bladders - We only carry bladders for extreme drilling conditions**
- **Our bladders are manufactured specifically for us by 2 industrial polymer engineering companies.. They manufacture for the US military , NASA Boeing, Pratt – Whitney, Exxon**
- **The service life of our rubbers are many times the expected life of natural rubber bladders**
- **The cost of ownership is about 1/3 of the traditional life cycle of a natural rubber**
- **Repair Kits consist of : see attachment Bladder,Gauge,Valve, and stabilizer if required.**
- **Repair times in the field average less than 1 hour per pump.**
- **Precharge is established to ensure proper bottom cone to discharge grate clearance.**
- **PDS offers fleet maintenance agreements to drilling contractors to have inspections and replacements done with reduced labor and mileage costs.**